

TALK

VIDEO

FROM THE MAKERS OF "SCOTCH" BRAND MAGNETIC TAPE

BULLETIN NUMBER 1

Proper Handling and Storage of "SCOTCH" Brand Video Tape No. 179

Magnetic properties of video tape are stable over periods of many years, as is the case with sound tape. Magnetic retentivity is permanent unless altered by magnetic means. For example, it may be altered by strong magnetic fields from permanent magnets or electro-magnets.

If unsatisfactory recordings on video tape *do* result, the most frequent cause is poor head-to-tape contact. This may be owing to improper handling of the tape or to unclean heads on the recorder, which lead, in turn, to contamination of the oxide surface of the tape. It may also be because of distortion of the base material of the tape—or because of a combination of all the factors cited here.

To insure uniform, high-quality results from video tape, it is recommended that the following precautions be observed in handling and storage:

Special Demagnetizing Storage Precautions

Care should be exercised to avoid accidental erasure of the tape by magnetic fields. Permanent magnets and strong electro-magnets will very likely cause erasure if placed within a few inches of the tape. This is the principle utilized in the so-called "bulk erasing" process, in which a whole reel of tape is demagnetized without unwinding. However, the fields necessary to produce erasure are so intense that it is not likely that this would occur accidentally, as in the case of proximity to ordinary electric house wiring. Erasure does not usually take place unless the field is strong enough to exert a noticeable attraction for the tape, or to induce vibration in the tape. Unrecorded tapes should not be placed

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near DC magnetic fields, or they may become "saturated" and record noisily. Both they and recorded tapes should be kept away from electro-magnetic bulk erasers and storage cabinets with magnetic latches.

Parts of the recorder also may become magnetized which can cause tape erasure or possible tape "saturation" with recording noise. As a preventative measure, demagnetization of critical recorder parts is recommended.

Proper Handling Precautions

Tapes should not be exposed when not in use. They should be placed on a precision reel for uniform winding and stored in a dust-proof polyethylene bag which is put back into the original box. These boxes should be stored *on end* to safeguard against bending or distorting the flanges of the reel and, thus, damaging the edges of the tape.

When tape is handled, as during splicing, clean white cloth gloves should be worn to prevent contamination of the tape by body oils and salts, which will pick up accumulations of foreign particles. During loading and unloading of the recorder, the wearing of gloves is not absolutely necessary, but is recommended as a general practice.

Heads and guides of the machine should be cleaned to remove accumulations of

foreign matter each time a tape is placed on the recorder. The machine manufacturer's recommended cleaning procedure should be followed.

Precautions Against Distortion of the Tape

Pre-recorded tapes will have been done at room temperature. A good rule is: record and play back uniformly at the same temperature range, or at the same ambient room temperature. This is because, to take a theoretical situation, in a tape recorded at -10°F. and played back at 70°F. , there would be a .16% dimensional change which is cumulative—that is, the tape would be out of synchronization 1 track in 10".

Thus, assuming that a tape has been in transit or in storage at sub-zero temperatures, it should be stored a minimum of 4 to 8 hours at room temperature before it is used. Actually, it will not regain complete equilibrium for 16 hours. This time can be shortened by accelerating temperatures, but these should not be over 100°F. ; otherwise, condensation, which may or may not prove a problem, will form on the tape. Avoid using direct heat, such as lamps or other spot heat, to "warm up" a tape.

In general, recommended storage conditions for video tapes are:

Humidity.....40-60% R.H.
Temperature.....60-80°F.